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No. 7

COURSES OFFERED
IN
GEOLOGY AND PETROLEUM
ENGINEERING
1922-23



BATON ROUGE, LOUISIANA

PUBLISHED BY THE UNIVERSITY TEN TIMES A YEAR

ENTERED AS SECOND CLASS MATTER, AT BATON ROUGE,
UNDER THE ACT OF JULY 16, 1894.

Dr. H. V. Howe, elected in June, took charge of the Department of Geology July 1, 1922.

The following courses in Geology, Petroleum Geology, and Petroleum Engineering are offered beginning with the session 1922-23.

COURSES OFFERED
IN
GEOLOGY AND PETROLEUM
ENGINEERING
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COURSE LEADING TO THE B. S. DEGREE IN GEOLOGY										
Hours a Week						SUBJECTS	Number of			
Laboratory			Recitations				Course	F	W	S
F	W	S	F	W	S					
						Freshman Class.				
			3	3	3	English or alternative.....	1	2	3	
			3	3	3	History	1	2	3	
4	4	4	3	3	3	Chemistry	1	2	3	
			3	3	3	Mathematics	1	2	3	
			3	3	3	German, French, or Spanish.....	1	2	3	
			2	2	2	Military Science and Drill	1	2	3	
						or				
3	3	3				Physical Training.....	1	2	3	
						Sophomore Class.				
			3	3	3	English or alternative				
			3	3	3	German, French, or Spanish.....	4	5	6	
			3	3	3	Government	1	2	3	
			3	3	3	Physics	1	2	3	
2	2	2				Physics	4	5	6	
			3	3	3	Geology	1	2	3	
			2	2	2	Military Science and Drill	4	5	6	
						or				
3	3	3				Physical Training.....	4	5	6	
						Junior Class.				
			3	3	3	Economics.....	1	2	3	
			3	3	3	Psychology	1	2	3	
6	6	6				Geology	7	8	9	
			9	9	9	Elective				
						Senior Class.				
			3	3	3	Geology	13	14	15	
6	6	6				Geology	10	11	12	
6	6	6				Geology	16	17	18	
			6	6	6	Other Science—A portion should be in the special work given on the Chemistry of Petroleum.....				
			2	2	2	General Elective.....				

SPECIAL COURSE
IN PETROLEUM ENGINEERING

For those graduate students and seniors who have the proper prerequisites, the following schedule of work in Petroleum Engineering is suggested. This course is intended to equip the student for work in the oil fields of Louisiana. The Geology courses listed below may all be taken in the same year, but the more advanced courses given in this list may not be taken without at the same time taking the courses which precede it.

Fall Term.—Geology 1, 7, 13, 16.

Chemistry 46, 49.

Winter Term.—Geology 2, 11a, 14, 17.

Chemistry 47, 50.

Spring Term.—Geology 3, 12a, 15, 18.

Chemistry 48, 51.

COURSES IN GEOLOGY

ASSISTANT PROFESSOR H. V. HOWE

1. Sec. a. Dynamic Geology.

This is an introductory course dealing with the forces and processes which are continually modifying the surface of the earth. Volcanoes, glaciers, oceans, lakes, rivers, the atmosphere, underground water, and organic life are each discussed in detail.

Fall. 3 hours. Monday, Wednesday, Friday. 9:00 o'clock.

1. Sec. b. Dynamic Geology. (Given only in 1922-'23.)

This course is offered primarily for agricultural students as an introduction to Geology, but is sufficiently similar to Geology 1 that other students may substitute it in place of that course if necessary in arranging schedules.

Tuesday, Thursday, Saturday. 10 o'clock.

2. Structural Geology.

This is a study of the materials of which the earth is composed and of the manner in which these materials are arranged. (Geology 1 and 2 cover most of the ground usually included in a course in Introductory Physiography, and hence should prove helpful to teachers of Physical Geography.)

Winter. 3 hours. Monday, Wednesday, Friday. 9:00 o'clock.

3. Historical Geology.

This is a study of the earth's history, of the changes of level between land and sea, of topography, of climate, and of the successive groups of animals and plants which have lived upon the globe.

Spring. 3 hours. Monday, Wednesday, Friday. 9:00 o'clock.

5. Agricultural Geology.

This course includes a study of the origin and modification of soils. It also deals with the origin and production of mineral fertilizers.

Winter. 2 hours. Tuesday, Thursday. 10:00 o'clock.

6. Geology of Louisiana.

The historical and structural geology of Louisiana is studied in its relation to the origin of the different soil types and mineral products of the State.

Spring. 2 hours. Tuesday, Thursday. 10:00 o'clock.

7. Introductory Mineralogy.

The physical and chemical properties of the more common minerals are studied. The latter portion of the course includes practice in sight determination of the more important rock types.

Fall. 6 hours Lab. Monday, Wednesday and Friday. 2:15 to 4:15 o'clock.

8. Crystallography.

The first half of the course deals with the different systems and classes in which minerals crystallize. Selected models and actual crystals representing the more important of these classes are drawn. For this work a knowledge of Descriptive Geometry will be found helpful, but is not required. The second half of the course is given to crystal optics and the use of the petrographic microscope in the study of minerals.

Winter. 6 hours Lab. Monday, Wednesday, Friday. 2:15 to 4:15 o'clock.

9. Advanced Mineralogy and Petrography.

The systematic determination of 50 minerals by means of their physical, chemical and optical properties occupies the first portion of the course. The latter portion of the

course gives an introduction to the determination of rocks by means of the petrographic microscope.

Spring. 6 hours Lab. Monday, Wednesday, Friday.
2:15 to 4:15 o'clock.

10. 11. 12. Paleontology.

This course is of especial importance to the oil geologist and is intended to give him the training necessary to determine the age of the formations with which he will have to deal in the field. The fall term is devoted to a study of the structures and classification of the different groups of animal and plant life which have existed on the earth in past ages. The winter term is devoted to a study of the fossil markers of the Paleozoic horizons. This portion of the course is intended especially for those expecting to work in the mid-continent oil fields. The spring term is devoted to a study of the Mesozoic and Cenezoic fossil markers and is intended to give the student the necessary training to determine the age of the formations in Louisiana, Eastern Texas, and California oil fields. 6 hours Lab. Fall, Winter, Spring. Monday, Wednesday, Friday. 2:15 to 4:15 o'clock.

11a. 12a. Paleontology. (Given only in 1922-'23.)

Special work in Paleontology offered for those taking the Petroleum Engineering work. 6 hours Lab. Winter, Spring. Hours to be arranged.

13. Economic Geology (Mineral Fuels).

This course deals with the production and geology of oil, gas and coal. Fall, 3 hours. Monday, Wednesday, Friday. 10 o'clock.

14. Economic Geology (Non-Metals except Fuels).

This course deals with the production and geology of the important non-metallic minerals. The geology of underground water is also treated.

Winter. 3 hours. Monday, Wednesday, Friday.
10:00 o'clock.



15. **Economic Geology (Metals).**

This course deals with the geology of metal mining and includes a study of the important metallic ores.

Spring. 3 hours. Monday, Wednesday and Friday.
10:00 o'clock.

16. 17. 18. **Petroleum Geology.**

This course takes up a detailed study of the geology and conditions favoring the accumulation of Petroleum in the important oil fields of the world. It also includes a study of the more important recent papers relating to the theory of oil migration and accumulation. This course is open to the graduate student and senior who may represent the proper prerequisites.

Fall, Winter, Spring. 6 hours Lab. Monday, Wednesday, Friday, 2:15 to 4:15 o'clock.